REMARKS

Claims 1-70 are pending in the application. The Applicants thank the Examiner for indicating the allowance of claims 28-29, 39-44 and 62. Claims 1 and 45 have been amended. In view of the following, it is respectfully submitted that all of the currently unallowed claims are in condition for allowance.

Rejection of Claims 1-3, 5, 8-17, 20, 23-25, 30-31, 33-38, 45-46, 48-54, 56, 58-59, 63 and 65-70 Under 35 U.S.C. § 102 As Being Anticipated By US Patent No. 5,436,736 to Shono

Claims 1 and 45

Claims 1 and 45 each recite modifying a pixel value only if the pixel value has a predetermined relationship to a threshold value.

As Applicants' attorney discussed in the previously submitted amendment to the application, in an embodiment of the invention, a circuit 100 adds a random number to (*i.e.*, modifies) only pixel values that are below (*i.e.*, have a predetermined relationship to) a threshold value.

As alluded to by the Examiner, and described at col. 5, lines 55-65 of Shono, the comparator 23 of Shono does compare a threshold value output from a random number generator 24 with lower-order pixel bit data to binarize the lower-order data. In addition, the adder 22 of Shono adds higher-order bit data to the binarized lower-order data (*i.e.*, modifies the lower-order data). However, Shono unconditionally adds the entirety of the lower-order data to higher-order bit data. There is simply no teaching or suggestion in Shono that modification of the lower-order data is contingent on any relationship or other condition, such as only if the pixel value has a predetermined relationship to the threshold value.

The Examiner states that "the claimed if the pixel value has a predetermined relationship to the threshold value, is inherent, because although the adder does not perform analysis of the conditionality, somewhere in the system a controller, CPU, a microprocessor, or a computer, sets the condition at which the addition, or any other operation, would be performed." Regardless of what happens elsewhere in the system

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of Shono, the modification recited in claim 1 is dependent upon the pixel value having a predetermined relationship to the threshold value. In Shono, the threshold value corresponds to the number from the generator 24, and, in FIG. 4 of Shono, it is seen that the modification performed by the adder 22 is performed independently of threshold value. While it is true that the value output from the adder 22 is a function of the threshold value, all pixel values are modified in some way. In contrast, as recited in claim 1, only the pixel values having the predetermined relationship with the threshold value are modified.

The Applicants respectfully reiterate that there is no teaching or suggestion in Shono of any "condition" under which the lower-order data is modified, irrespective of the component that may "set it." Moreover, there is no teaching or suggestion in Shono that any such condition is, specifically, a predetermined relationship to a threshold value, as is claimed.

Claims 15, 24, 31, 54, 58 and 63

Claims 15, 24, 31, 54, 58 and 63 are patentable for reasons similar to those discussed above in connection with claims 1 and 45.

Claims 2-3, 5, 8-10, 16-17, 20, 23, 25, 30, 33, 46, 48-50, 56, 59 and 65

Claims 2-3, 5, 8-10, 16-17, 20, 23, 25, 30, 33, 46, 48-50, 56, 59 and 65 are patentable by virtue of their respective dependencies from claims 1, 15, 24, 31, 45, 54, 58 and 63.

Claims 11, 24, 31, 34, 51, 58, 63 and 66

Claims 11, 24, 31, 34, 51, 58, 63 and 66 each recite combining/adding a random number with/to a pixel value.

Shono, on the other hand, fails to teach or suggest a random number and pixel value being combined or added to one another. Shono, at, e.g., FIG. 6 and col. 7, lines 18-24, teaches an operator 25' that divides input image data of an object pixel into

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higher-order bit data and lower-order bit data. The higher-order bit data are input into an operator 26' with a random number from a random number generator 24'. The operator 26' modifies the value of the random number in accordance with the higher-order bit data. Shono fails to teach in any way, however, that the operator 26' combines the random number with the higher-order bit data.

Claims 12-14, 25, 30, 33, 35-38, 52-53, 59, 65 and 67-70

Claims 12-14, 16-17, 20, 23, 25, 30, 33, 35-38, 52-53, 56, 59, 65 and 67-70 are patentable by virtue of their respective dependencies from claims 11, 24, 31, 34, 51, 58, 63 and 66.

Rejection of Claims 4, 6-7, 18-19, 21-22, 26-27, 32, 55, 60-61 and 64 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Shono

Claims 4, 6-7, 18-19, 21-22, 26-27, 32, 55, 60-61 and 64 are patentable by virtue of their respective dependencies from claims 1, 15, 24, 31, 54, 58 and 63.

Objection to Claim 62

The Examiner objects to claim 62 as being dependent upon a rejected base claim. However, claim 62 was rewritten in independent form by amendment in the previous paper submitted in this case by the Applicants, and is indicated in this action as being allowed. The Applicants respectfully request clarification of the status of claim 62.
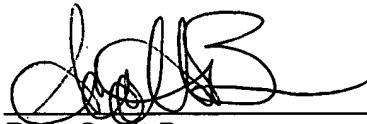
CONCLUSION

The present patent application is in condition for allowance, and favorable consideration and a Notice of Allowance are respectfully requested. The Examiner is requested to contact the undersigned at the number listed below for a telephone interview

if, upon consideration of this response, the Examiner determines any pending claims are not in condition for allowance.

In the event additional fees are due as a result of this Response, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully submitted,
GRAYBEAL JACKSON HALEY LLP

Date: August 20, 2004

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